

destroyed. On the contrary every thing indicates a former state of tranquillity, during which various deposits were accumulating near the then existing coasts, in the same manner, as we may suppose others are at this day in progress. The only physical change, which we know has taken place, since the existence of these ancient mammalia, has been a small and gradual rising of the continent; but it is difficult to believe, that this alone could have so greatly modified the climate, as to have been the cause of the utter extermination of so many animals. Mr. Owen will mention the exact locality where the remains of each quadruped were discovered; and, at the conclusion, it will be easy to specify by name those, which, from being embedded in the same deposit, are known formerly to have co-existed on the continent of South America.

FOSSIL MAMMALIA.

BY MR. OWEN.

It may be expected that the description of the osseous remains of extinct Mammalia, which rank amongst the most interesting results of Mr. Darwin's researches in South America, should be preceded by some account of the fossil mammiferous animals which have been previously discovered in that Continent. The results of such a retrospect are, however, necessarily comprised in a very brief statement; for the South American relics of extinct Mammalia, hitherto described, are limited, so far as I know, to three species of Mastodon, and the gigantic Megatherium.

One of the above species of Mastodon (*Mast. Cordillerarum*) was established by Cuvier* on remains discovered by Humboldt, in Quito, near the volcanic mountain, called *Imbaburra*, at an elevation of 1200 toises above the level of the sea; and likewise at the Cordilleras of Chiquitos, near Santa Cruz de la Sierra, a locality which is near the centre of South America. A second species (*Mastodon Humboldtii*, Cuv.†) is indicated by molar teeth, stated to have been discovered by the same philosophic traveller, in Chile, near the city of Concepcion. The third species of Mastodon appears to have once ranged in vast troops over the wide empire of Peru: numerous teeth were brought thence to Paris by Dombey,‡ and similar teeth, together with a humerus and tibia from Santa Fé de Bogota were placed by Humboldt at the disposal of Cuvier,§ who considered them to belong to the

* See Ossements Fossiles, Ed. iv. tom. ii. p. 368. Pl. 27. fig. 1. 12.

† *Ibid.* p. 370. Pl. 27. fig. 5.

‡ *Ibid.* p. 347, 367.

§ *Ibid.* p. 337. Pl. 26. fig. 7.